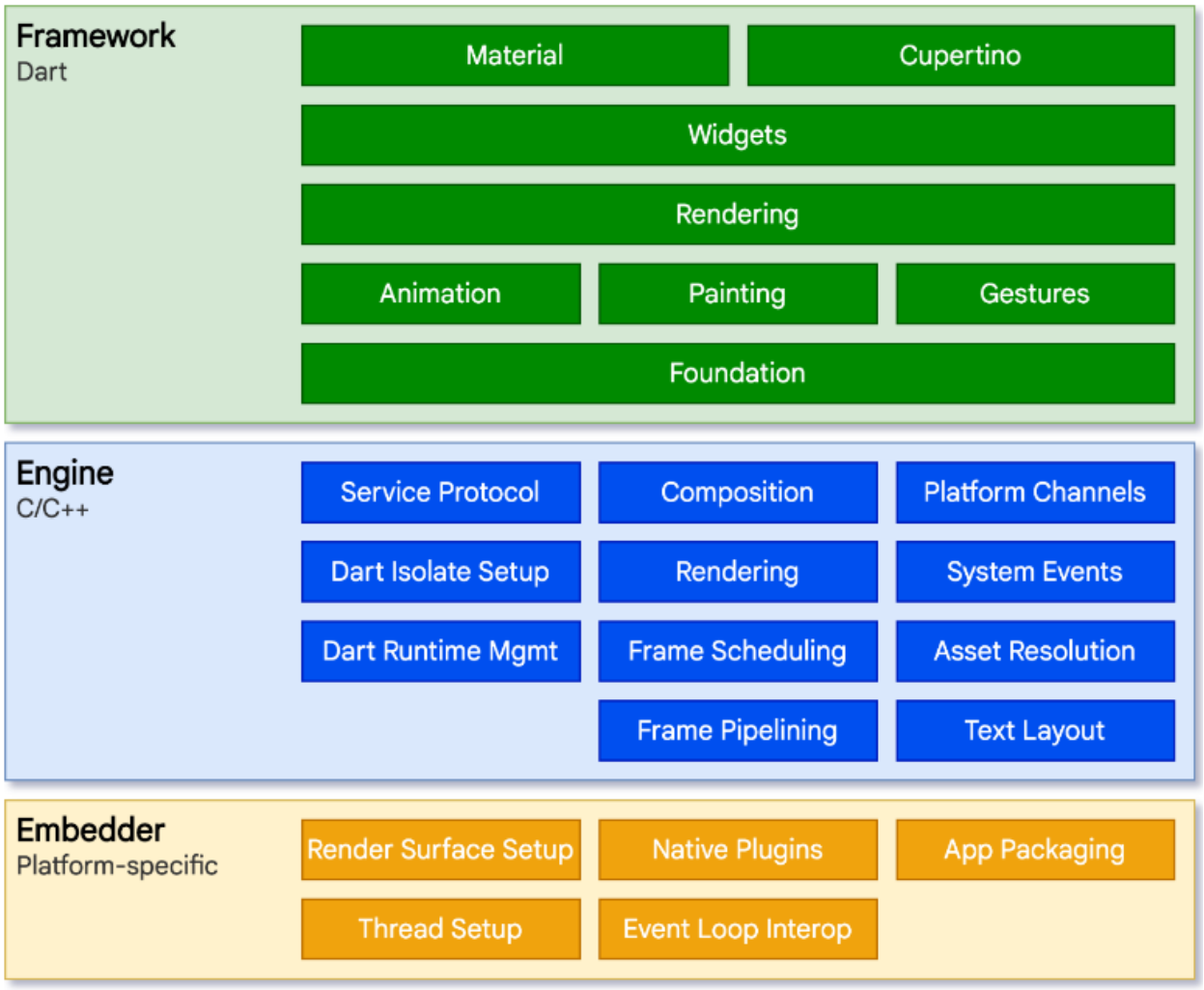
Flutter VS. .NET MAUI. What is the better choice for cross platform development?

FLUTTER 3

Overview:

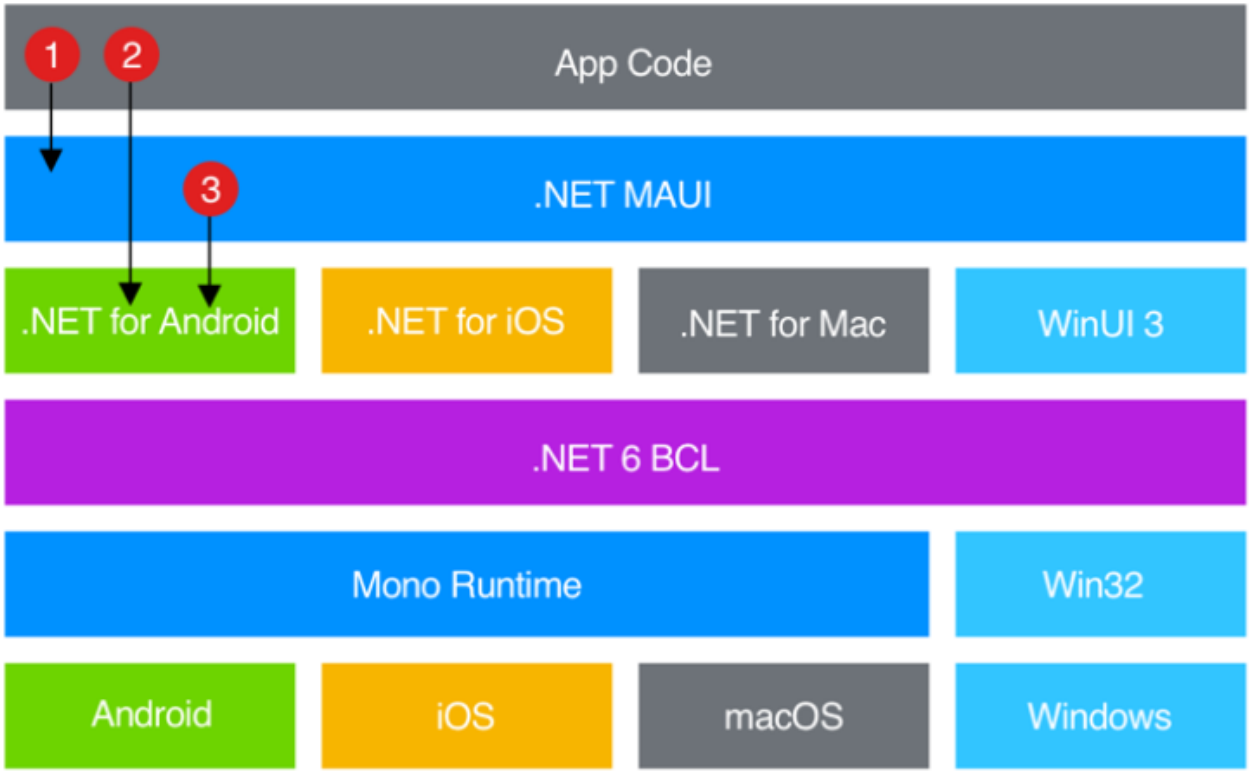
Flutter is a cross-platform framework developed by Google in May 2017. It is built with the Dart programming language, a C-based language also developed by Google.



.NET MAUI

Overview:

.NET MAUI is the evolution of Xamarin.Forms, a cross platform mobile application framework that targeted iOS, Android, and Windows.



Comparison of features between Flutter and .NET MAUI

Architecture

Flutter

The architecture of Flutter is arranged quite simply and organically at the same time. Most of the necessary components are already built into the

Dart framework, so communication with native modules is often not required. Already implemented frameworks such as Material Design and Cupertino, which contain technologies for creating applications.

This is not a huge hassle and is insanely pleasant for both companies and employees. It has an engine with Skia, powerful and reliable, with a large number of necessary protocols and channels.

.Net Maui

.Net Maui has a Mono environment for use in iOS and Android. Mono is combined with different components to give a smooth response. For example, in Android, it runs along with Android Runtime, for iOS, it uses Objective-C runtime and Linux kernel. Support for Swift is also present in .Net Maui, but it is worth noting that it is still not official. Here the architectural struggle Flutter with .Net Maui ends.

Installation

Flutter

What is cool about Flutter – its installation does not take much time and effort, because you just need to download a file for the operating system you need and you are ready to work. Download the file, update it and you can easily enjoy the process because all the documentation is already on the official website.

.Net Maui

And then the real .Net Maui vs Flutter struggle for the convenience of installation begins. If you ask whether it is possible to download the boot file

and start working out. First, find Visual Studio at least 2019, install Community, Visual Studio Professional, and only then start the process. You can't do without a strong link to the Visual Studio documentation!

API

Flutter

If you have started working with Flutter, then no doubt you will have all the tools available to create a rich, diverse visualization. Its apps are so beautifully rendered through API access, navigation, state management, libraries, and testing. It is possible to access third-party libraries to get even more benefits, and Material Design and Cupertino will easily make it possible to tear off the user interface identically on both iOS and Android.

.Net Maui

If you compare Flutter with .Net Maui, then Microsoft has created very reliable documentation that works properly. Officially, .Net Maui is supported by iOS, Android, Forums, mac OS, watches, tv OS, etc., and there is also a huge database of components and modules that developers use.

UI Components

Flutter

You probably remember the famous phrase that caught the Internet – "All about widgets", where the main advantages of Flutter are revealed. Flutter and .Net Maui creates cross-platform applications, but Flutter uses its own built-in widgets for them. Thanks to this, unique beauty apps are created from a large library of customizable widgets. As we mentioned earlier, there

is access to navigation, various interaction models, layouts, and so on with support for animation and movements.

.Net Maui

Is it better to have your own built-in interface components or those that are easy to embed? Be that as it may, .Net Maui boasts built-in systems, which you can learn in the documentation on the official website. At the same time, your own components can be just as bright, but they are already there.

IDEs Support

Flutter

Flutter is completely free from the development environment and many people are impressed by this adaptability. You are no longer tied to Android Studio, IntelliJ IDEA, or Visual Studio Code and can choose what you like or are personally comfortable with. You can use all IDE options freely.

.Net Maui

In this position, the difficulties begin for the developer, if he is not associated with Microsoft. Unbreakable chains to the Visual Studio IDE bind .Net Maui vs Flutter. What difficulties can arise here and why is Flutter better than .Net Maui in freedom of choice? The concept of VS Code or similar IDE is difficult to implement in this perspective. And more importantly, for corporate users, you need to buy a Microsoft Visual Studio IDE license, which is already stopping many.

Performance

Flutter

It uses the Dart language, which compiles the source code into its own, creating an application that strongly resembles the native one. Flutter uses a fast, GPU-accelerated rendering engine that provides high-quality graphics and smooth animations.

.Net Maui

.NET MAUI uses the native UI controls of each platform to ensure that the app has good performance.

Community, Support, and Documentation

Flutter

Flutter has a large, growing community and a wide range of resources, including tutorials, videos, and open-source packages.

The community is growing rapidly, and there are new requests. Flutter's active life began in 2018, after the large-scale premiere of Flutter Live. Google does everything to ensure that developers around the world do not have problems with clear and structured documentation available.

.Net Maui

NET MAUI is a relatively new framework, but it has a strong backing from Microsoft and the .NET community.

Pricing

Flutter

The huge difference between Flutter and .Net Maui is in price policy. We have come close to the most intriguing aspect from an economic point of view-pricing policy. Flutter here can be said mercilessly simply. It is completely free and you only need to spend money on a talented developer.

.Net Maui

.Net Maui itself is an open free software development kit, but the pitfalls begin in the form of a license for commercial development, which you need to buy. Prices in particular for Visual Studio Enterprise start from $499 to $2,999

Flutter vs .Net Maui: Comparison Table

Feature	Flutter	.NET MAUI
First Introduced	2017	2022
Programming Language	Dart	C#
Platform Support	Cross-platform (iOS, Android, Web, Desktop)	Cross-platform (Windows, macOS, iOS, Android)
Ui Design	Rich set of customizable widgets	XAML-based UI design
Development Speed	Fast development cycle with "Hot Reload" feature	Moderate development cycle with the need for a full

		build-and-deploy cycle for UI changes
Community and Ecosystem	Growing and vibrant community with a large number of plugins and packages	small community with a libraries and tools
Performance	Fast and efficient with the use of Skia graphics library	Good performance with the use of .NET runtime and native controls
Cross-platform features	Simple and common codebase for multiple platforms	Custom controls and renderers need to implement same advanced UI components on multiple platforms
Popularity	Quite High	Considerably lower than Flutter's
Component Support	Wide range of components, plugins available. Integration is easy.	Good number of components are available but integration is not super smooth.
Visual	Native-like	Not as great as Flutter's
UI Components	Built-in Customize UI components	Native UI Components
Heavy Graphics and Animation	Moderate and rich	Poor
Price	Free	Free, but for commercial rate – from $499 up to $2999
Used By	Google Realtor.com Tencent The New York Times	

Groupon Alibaba Group Square Google Ads BMW eBay

One key advantage of Flutter is its speed. It uses Dart, a fast, efficient language that allows for hot reloading. Flutter offers greater flexibility when it comes to design. Developers can use any widgets they want and are not limited to a specific set of tools or components. This gives them the freedom to create truly unique applications. With over 100+ Widgets, you can create beautiful, complex apps without sacrificing speed or performance. .NET MAUI also has a widget library, but it isn't as comprehensive.

What You Should Choose: Flutter or .Net Maui?

Obviously, Flutter and .Net Maui are both strong players in the cross-platform application market. However, many business owners are still confused about Flutter vs .Net Maui as their main strategy.

We will once again go through the most important points for the implementation of the project so that we can say with confidence in which aspects Flutter is better than .Net Maui and how the difference between Flutter and .Net Maui influences the projects.

- Flutter is a more reliable tool for creating complex projects that require increased attention to development and testing, where Flutter has huge advantages.
- If you need a super-fast beautiful application with huge functionality, Flutter is better choice in case of performance.
- If you want to easily have an experienced talented employee, this is also not a problem, because Flutter is becoming mega-popular.
- You will find it easier to find a Flutter developer than a .Net Maui one, despite the great popularity of the development language.
- You don’t want to pay for the licensed version, and you don’t have to – Flutter is freely available.
- You want to have powerful documentation and strong support – this may also apply to Flutter
- Flutter apps tend to be smaller and faster than those built with .NET MAUI. This is partly due to the small size of the compiled code.
- Overall, Flutter provides a more efficient and flexible solution for cross-platform app development.